

Date: Friday, 31/10/2008 10:20:14 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001, Dart Helicopters Services

Job Number: 43122

Estimate Number: 12300

P.O. Number:

This Issue: 31/10/2008

S.O. No.:

Prsht Rev.: NC

First Issue: 1/1

Type: MACHINED PARTS

Previous Run: 42415

Written By:

Checked & Approved By: JD 08.10.31

Comment: Est Rev:A New Issue 06-02-28 ULM
Est Rev:B As per Rev B 06-03-30 ULM
Est Rev:C Now On Doosan Lathe ULM Verified BY:DD

Drawing Name: BLADE FITTING

Part Number: D3488042

Drawing Number: D3488 / DSK101

Project Number: N/A

Drawing Revision: B7D

Material:

Due Date:

15/11/2008

Qty:

20 Um:

Each

Additional Product

Job Number:



Seq. #:

Machine Or Operation:

Description:

1.0

D6103003

Round Billet, Aluminum



Comment: Qty.: 1.0000 Each(s)/Unit Total: 20.0000 Each(s)

Aluminum Round Billet D6103-003

Batch: B 41965 (X4)B 42281 (X25)

2.0

DOOSAN LATHE

DOOSAN LATHE



Comment: DOOSAN CNC LATHE

1-Turn as per Dwg DSK 101 & Folio FA627

2-Deburr

SD 0811121

3.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

SD 0811121

4.0

HAAS1

HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine as per Folio FA627 & Dwg D3488

2-Deburr

29 08/11/21M.A08/11/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 31/10/2008 10:20:14 AM
User: Julie Dawson

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE FITTING

Job Number: 43122

Part Number: D3488042

Job Number:



Seq. #: Machine Or Operation: Description :

5.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

20 08/11/29 J.A

08/11/28

6.0

QC8

SECOND CHECK



Comment: SECOND CHECK

J.L 08/12/01

(19)

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

J.L

08/12/01

(X19)

8.0

POWDER COATING

POWDER COATING



M 109152



(19X)

Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME:

11:10 OF

OVEN TEMPERATURE:

320

FINISH TIME:

11:40

M.L 08/12/01

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

F.L 08/12/01

(19)

10.0

ALS71032225

INSERT



*



(19X)

Comment: Qty.: 4.0000 Each(s)/Unit Total: 80.0000 Each(s)

Pick:

Qty Part Number Description Batch

4 ALS7-1032-225 Insert

M 100621

11.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



(19X)

Comment: HAND FINISHING RESOURCE #1

Install Inserts as per Dwg D3488

M.L 08/12/01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 31/10/2008 10:20:14 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE FITTING

Job Number: 43122

Part Number: D3488042

Job Number:



Seq. #: Machine Or Operation: Description :

12.0

QC5

INSPECT WORK TO CURRENT STEP



MF 08 12 01



(19)

Comment: INSPECT WORK TO CURRENT STEP

13.0

PACKAGING 1

PACKAGING RESOURCE #1



(19X)

Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

F P-8

m-l 08/12/01

14.0

QC21

FINAL INSPECTION/W/O RELEASE



08/12/02

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 08-12-01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: W3122
Description: Blade Fitting, RH / Turning Detail for D3488-1/-2		Part Number: D3488-2
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

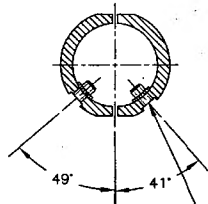
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
Ø2.150	+/-0.005	2.145	/			
Ø2.780	+/-0.005	Ø2.781	/			
Ø3.125	+/-0.010	Ø3.124	/			
Ø3.346	+/-0.010	Ø3.347	/			
0.125 x 45°	+/-0.010 x +/-0.1°	.117 x 45°	/			
8.000	+0.030/-0.000	8.012	/			
9.250	+/-0.010	9.248	/			
0.188	+/-0.010	.187	/			
R0.032	+/-0.010	R.032	/			
R0.062	+/-0.010	R.062	/			
Ø0.297	+0.005/-0.001	Ø.298	/			
Ø0.430	+/-0.010	Ø.430	/			
0.100	+/-0.010	.108	/			
0.125	+/-0.010	.128	/			
2.620	+/-0.010	2.620	/			
3.500	+/-0.010	3.500	/			
1.005	+/-0.010	1.005	/			
Ø0.484	+0.005/-0.001	Ø.485	/			
1.180	+/-0.010	1.180	/			
3.150	+/-0.010	3.150	/			
3.070	+/-0.010	3.070	/			
8.000	+/-0.010					N/A
R0.063	+/-0.010	R.063	/			

DART AEROSPACE LTD		Work Order: 43122
Description: Blade Fitting, RH / Turning Detail for D3488-1/-2		Part Number: D3488-2
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 2 of 2

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Milling Section						
Ø0.508	+0.006/-0.001	Ø0.5089	✓			
0.750	+/-0.010	0.740	✓			
1.500	+/-0.010	1.498	✓			
11.18	+/-0.030	11.181	✓			
R0.062	+/-0.010	R0.062	✓			
0.125	+/-0.010	0.130	✓			
0.590	+/-0.010	0.589	✓			
0.793	+/-0.010	0.797	✓			
1.351	+/-0.010	1.349	✓			
1.317	+/-0.010	1.315	✓			
1.802	+/-0.010	1.801	✓			

Measured by: B.A	Audited by: J.L	Prototype Approval:	N/A
Date: 08/11/28	Date: 08/12/01	Date:	N/A

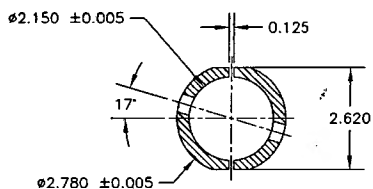
Rev	Date	Change	Revised by	Approved
A	06.03.31	New Issue	KJ/JLM	
B	08.09.19	Reformat P/O D3488-042	KJ/JLM	



SECTION B-B

Ø0.297
C'BORE Ø0.430 x 0.100
INSTALL ALS4-1032-225 (OR AKS4-1032-225
OR ALS7-1032-225 OR AKS7-1032-225)
INSERTS AFTER FINISH
(4 PLACES)

4



SECTION A-A

D3488-041/-042 BLADE FITTING ASSEMBLY PARTS LIST

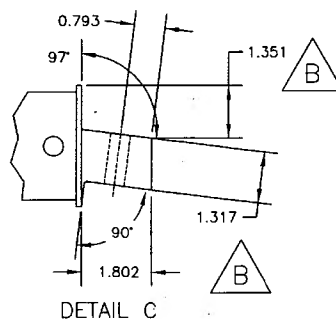
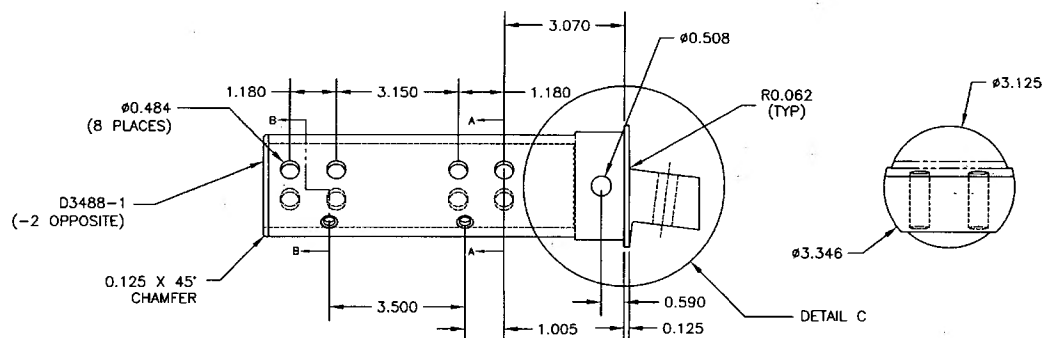
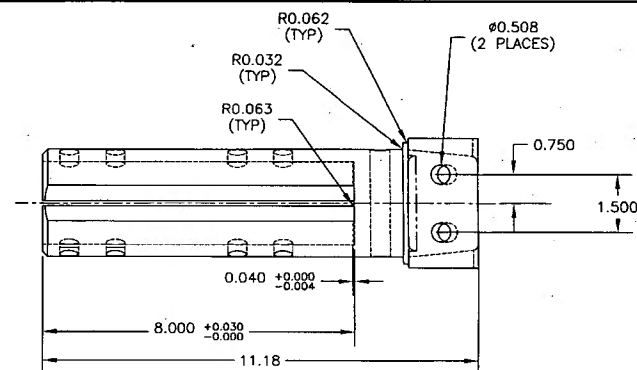
QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X	X	D3488-041	BLADE FITTING ASSEMBLY (LH)
		D3488-042	BLADE FITTING ASSEMBLY (RH)
1		D3488-1	BLADE FITTING (LH)
	1	D3488-2	BLADE FITTING (RH)
4	4	ALS4-1032-225 or AKS4-1032-225 or ALS7-1032-225 or AKS7-1032-225	INSERT

D3488-041/-042 BLADE FITTING

- MATERIAL: MAKE D3488-1/-2 FROM ALUMINUM 7075-T7351 ROUND BAR
PER QQ-A-225/9
(REF. DART MATERIAL SPEC M7075T73R)
- FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- INSTALL INSERTS AFTER POWDER COAT
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

WORK ORDER
43122

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WITHOUT NOTICE
ENGINEERING
RETURN TO
SHOP COPY



L D3488-041 SHOWN (D3488-042 OPPOSITE) R

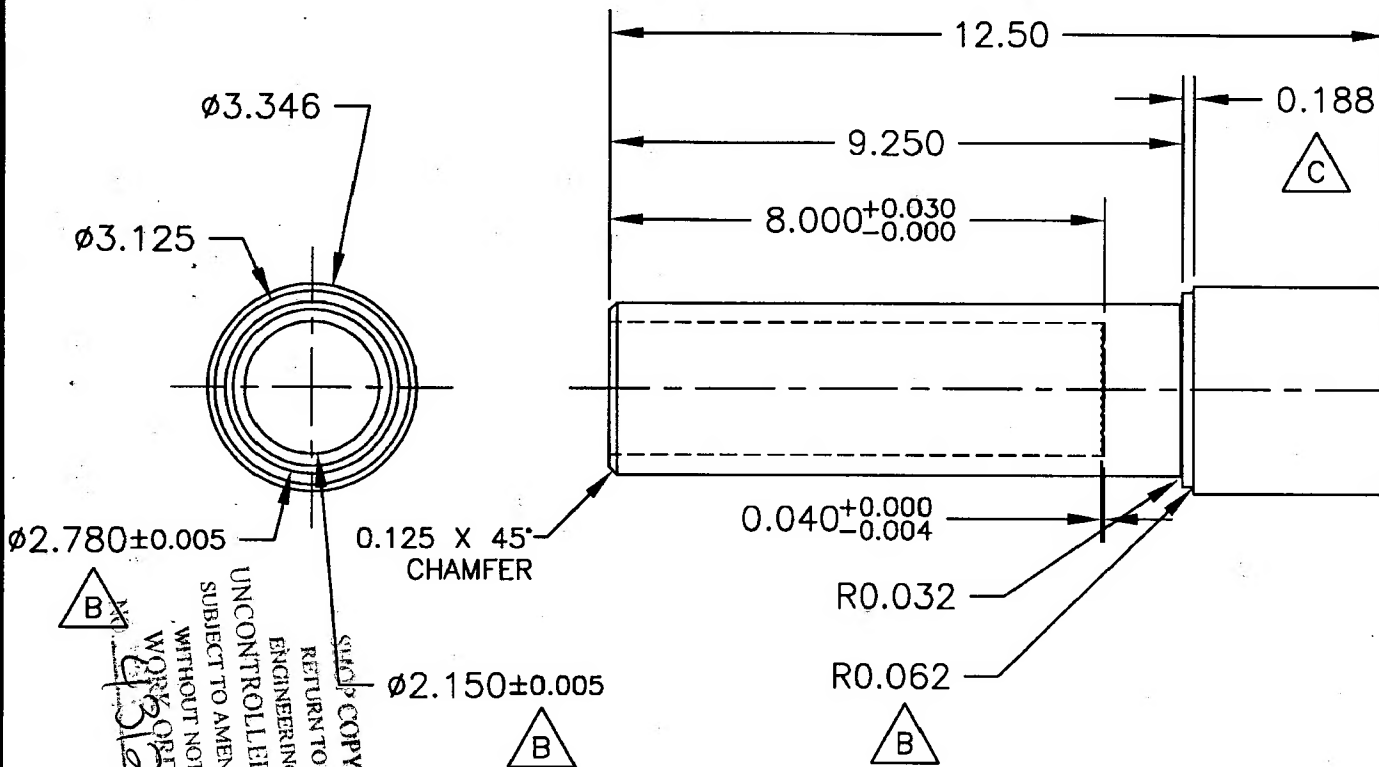
RELEASED
06.03.15 PH
PER DS
ECN #734

B	06.03.15	CHANGE THICKNESS
A	05.12.20	NEW ISSUE
DESIGN	PH	DRAWN BY PH
CHECKED	#	APPROVED #
DATE	06.03.15	TITLE
		BLADE FITTING
		DART AEROSPACE USA, INC.
		PORT HADLOCK, WA
		REV. B
		SHEET 1 OF 1
		SCALE
		1:3

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DART

DESIGN	DRAWN BY	DART AEROSPACE USA, INC.		
04	04	PORT HADLOCK, WA		
CHECKED	APPROVED	DRAWING NO.	REV. D	
04	04	DSK-101	SHEET 1 OF 1	
DATE		TITLE	SCALE	
06.05.09		D3488-1/-2 TURNING DETAIL	1:3	
A	05.12.21	NEW ISSUE		
B	06.03.02	ADD TOLERANCES AND RADIUS		
C	06.04.17	0.188 WAS 0.125		
D	06.05.09	REMOVE DIAMETER FOR CHAMFER		



- DSK 101
- 1) MATERIAL: MAKE FROM ALUMINUM 7075-T7351 ROUND BAR PER QQ-A-225/9 (REF. DART MATERIAL SPEC M7075T73R)
- 2) FINISH: NONE
- 3) BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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WORK ORDER
031200

